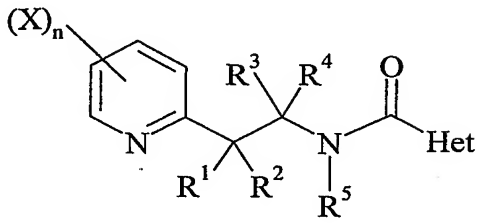
CLAIMS

1. A compound of general formula (I) :



(I)

in which :

- n is 1, 2, 3 or 4;

- X is the same or different and is a halogen atom, a nitro group, a cyano group, a hydroxy group, an amino group, a sulfanyl group, a pentafluoro-λ^6-sulfanyl group, a formyl group, a formyloxy group, a formylamino group, a carboxy group, a carbamoyl group, a N-hydroxycarbamoyl group, a carbamate group, a (hydroxyimino)-C_1-C_6-alkyl group, a C_1-C_8-alkyl, a C_2-C_8-alkenyl, a C_2-C_8-alkynyl, a C_1-C_8-alkylamino, a di-C_1-C_8-alkylamino, a C_1-C_8-alkoxy, a C_1-C_8-halogenoalkoxy having 1 to 5 halogen atoms, a C_1-C_8-alkylsulfanyl, a C_1-C_8-halogenoalkylsulfanyl having 1 to 5 halogen atoms, a C_2-C_8-alkenyloxy, a C_2-C_8-halogenoalkenyloxy having 1 to 5 halogen atoms, a C_3-C_8-alkynyloxy, a C_3-C_8-halogenoalkynyloxy having 1 to 5 halogen atoms, a C_3-C_8-cycloalkyl, a C_3-C_8-halogenocycloalkyl having 1 to 5 halogen atoms, a C_1-C_8-alkylcarbonyl, a C_1-C_8-halogenoalkylcarbonyl having 1 to 5 halogen atoms, a C_1-C_8-alkylcarbamoyl, a di-C_1-C_8-alkylcarbamoyl, a N-C_1-C_8-alkyloxycarbamoyl, a C_1-C_8-alkoxycarbamoyl, a N-C_1-C_8-alkyl-C_1-C_8-alkoxycarbamoyl, a C_1-C_8-alkoxycarbonyl, a C_1-C_8-halogenoalkoxycarbonyl having 1 to 5 halogen atoms, a C_1-C_8-alkylcarbonyloxy, a C_1-C_8-halogenoalkylcarbonyloxy having 1 to 5 halogen atoms, a C_1-C_8-alkylcarbonylamino, a C_1-C_8-halogenoalkylcarbonylamino having 1 to 5 halogen atoms, a C_1-C_8-alkylaminocarbonyloxy, a di-C_1-C_8-alkylaminocarbonyloxy, a C_1-C_8-alkyloxycarbonyloxy, a C_1-C_8-alkylsulphenyl, a C_1-C_8-halogenoalkylsulphenyl having 1 to 5 halogen atoms, a C_1-C_8-alkylsulphinyl, a C_1-C_8-halogenoalkylsulphinyl having 1 to 5 halogen atoms, a C_1-C_8-alkylsulphonyl, a C_1-C_8-halogenoalkylsulphonyl having 1 to 5 halogen atoms, a C_1-C_6-alkoxyimino, a (C_1-C_6-alkoxyimino)-C_1-C_6-alkyl, a (C_1-C_6-alkenyloxyimino)-C_1-C_6-alkyl, a (C_1-C_6-alkynyloxyimino)-C_1-C_6-alkyl, a (benzyloxyimino)-C_1-C_6-alkyl, a benzyloxy, a benzylsulfanyl, a benzylamino, a phenoxy, a phenylsulfanyl or a phenylamino;

- R^1 , R^2 , R^3 and R^4 are the same or different and are a hydrogen atom, a halogen atom, a cyano group, a hydroxy group, an amino group, a sulfanyl group, a formyl group, a formyloxy group, a formylamino group, a carboxy group, a carbamoyl group, a N-hydroxycarbamoyl group, a carbamate group, a (hydroxyimino)-C_1-C_6-alkyl group, a C_1-C_8-alkyl, a C_1-C_8-halogenoalkyl having 1 to 5 halogen atoms, a C_2-C_8-alkenyl, a C_2-C_8-alkynyl, a C_1-C_8-alkylamino, a di-C_1-C_8-alkylamino, a C_1-C_8-alkoxy, a C_1-C_8-halogenoalkoxy having 1 to 5 halogen atoms, a C_1-C_8-alkylsulfanyl, a C_1-C_8-halogenoalkylsulfanyl having 1 to 5 halogen atoms, a C_2-C_8-alkenyloxy, a C_2-C_8-halogenoalkenyloxy having 1 to 5 halogen atoms, a C_3-C_8-alkynyloxy, a C_3-C_8-halogenoalkynyloxy having 1 to 5 halogen atoms, a C_3-C_8-cycloalkyl, a C_3-C_8-halogenocycloalkyl having 1 to 5 halogen atoms, a C_1-C_8-alkylcarbonyl, a C_1-C_8-halogenoalkylcarbonyl having 1 to 5 halogen atoms, a C_1-C_8-alkylcarbamoyl, a di-C_1-C_8-alkylcarbamoyl, a N-C_1-C_8-alkyloxycarbamoyl, a C_1-C_8-alkoxycarbamoyl, a N-C_1-C_8-alkyl-C_1-C_8-alkoxycarbamoyl, a C_1-C_8-alkoxycarbonyl, a C_1-C_8-halogenoalkoxycarbonyl having 1 to 5 halogen atoms, a C_1-C_8-alkylcarbonyloxy, a C_1-C_8-halogenoalkylcarbonyloxy having 1 to 5 halogen atoms, a C_1-C_8-alkylcarbonylamino, a C_1-C_8-halogenoalkylcarbonylamino having 1 to 5 halogen atoms, a C_1-C_8-alkylaminocarbonyloxy, a di-C_1-C_8-alkylaminocarbonyloxy, a C_1-C_8-alkyloxycarbonyloxy, a C_1-C_8-alkylsulphenyl, a C_1-C_8-halogenoalkylsulphenyl having 1 to 5 halogen atoms, a C_1-C_8-alkylsulphinyl, a C_1-C_8-halogenoalkylsulphinyl having 1 to 5 halogen atoms, a C_1-C_8-alkylsulphonyl, a C_1-C_8-halogenoalkylsulphonyl having 1 to 5 halogen atoms, a benzyloxy, a benzylsulfanyl, a benzylamino, a phenoxy, a phenylsulfanyl or a phenylamino, a phenyl group, a phenyl sulphanyl group;

or R^1 and R^2 may form together a cyclopropyl, a cylcobutyl, a cyclopentyl or a cyclohexyl;

with the proviso that when three of the four substituents R^1, R^2, R^3 and R^4 are a hydrogen atom, then the fourth substituent is not a hydrogen atom;

- R^5 is a hydrogen atom, a cyano group, a formyl group, a hydroxy group, a C_1-C_6-alkyl, a C_1-C_6-halogenoalkyl having 1 to 5 halogen atoms, a C_1-C_6-alkoxy, a C_1-C_6-halogenoalkoxy having 1 to 5 halogen atoms, a C_3-C_6-cycloalkyl, a C_3-C_6-halogenocycloalkyl having 1 to 5 halogen atoms, a C_2-C_6-alkenyl, a C_2-C_6-alkynyl, a C_1-C_6-alkoxy-C_1-C_6-alkyl, a C_1-C_6-cyanoalkyl, a C_1-C_6-aminoalkyl, a C_1-C_6-alkylamino-C_1-C_6-alkyl, a di-C_1-C_6-alkylamino-C_1-C_6-alkyl, a C_1-C_6-alkylcarbonyl, a C_1-C_6-halogenalkylcarbonyl having 1 to 5 halogen atoms, a C_1-C_6-alkyloxycarbonyl, a C_1-C_6-benzyloxycarbonyl, a C_1-C_6-alkoxy-C_1-C_6-alkylcarbonyl, a C_1-C_6-alkylsulfonyl or a C_1-C_6-halogenoalkylsulfonyl having 1 to 5 halogen atoms;

- Het represents 5-, 6- or 7-membered heterocycle with one, two or three heteroatoms which may be the same or different; Het being linked by a carbon atom and being at least substituted in ortho position;

as well as its salts, N-oxydes, metallic and metalloidic complexes.

2. A compound according to claim 1, characterised in that n is 1, 2 or 3.

3. A compound according to claim 1 or 2, characterised in that at least one of the X substituent is a halogen atom, a C_1-C_8-alkyl, a C_1-C_6-alkoxyimino, a (C_1-C_6-alkoxyimino)-C_1-C_6-alkyl, or a C_1-C_6-alkoxy-C_1-C_6-alkylcarbonyl.

4. A compound according to any of the claims 1 to 3, characterised in that the 2-pyridyl is substituted in 3-, 5- and/or in 6-position.

5. A compound according to any of the claims 1 to 4, characterised in that R^1 and R^2 are chosen, independently of each other, as being a hydrogen atom, a halogen atom, a cyano group, a hydroxy group, a C_1-C_6-alkyl, a C_1-C_6-halogenoalkyl having 1 to 5 halogen atoms, a C_2-C_6-alkenyl, a C_1-C_6-alkoxy, a C_1-C_6-alkylsulfanyl, a C_1-C_6-alkylsulfenyl, a C_1-C_6-alkylsulfinyl, a C_1-C_6-alkoxycarbonyl, a C_1-C_6-alkylcarbonylamino, a C_1-C_6-alkoxycarbonyloxy, a C_1-C_6-alkoxycarbonylamino or a phenyl group.

6. A compound according to claim 5, characterised in that R^1 and R^2 are chosen, independently of each other, as being a halogen atom, a C_1-C_6-alkyl, a C_1-C_6-halogenoalkyl having 1 to 5 halogen atoms or a C_1-C_6-alkylcarbonylamino.

7. A compound according to any of the claims 1 to 6, characterised in that R^3 and R^4 are chosen, independently of each other, as being a hydrogen atom, a halogen atom, a cyano group, a C_1-C_6-alkyl, a C_1-C_6-halogenoalkyl having 1 to 5 halogen atoms, a C_1-C_6-alkylcarbonylamino or a phenyl group.

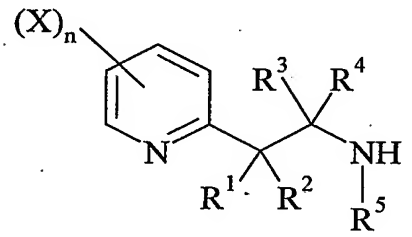
8. A compound according to claim 7, characterised in that R^3 and R^4 are chosen, independently of each other, as being a halogen atom, a C_1-C_6-alkyl, a C_1-C_6-halogenoalkyl having 1 to 5 halogen atoms or a phenyl group.

9. A compound according to any of the claims 1 to 8, characterised in that R^5 is a hydrogen atom or a C_3-C_7-cycloalkyl.

10. A compound according to any of the claims 1 to 9, characterised in that Het is a five membered ring heterocycle.

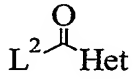
11. A compound according to any of the claims 1 to 9, characterised in that Het is a six membered ring heterocycle.

12. A process for the preparation of a compound of general formula (I) as defined in any of the claims 1 to 11, which comprises reacting a 2-pyridine derivative of general formula (II) or one of its salt :



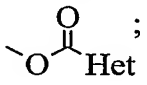
(II)

in which X, n, R^1, R^2, R^3, R^4 and R^5 are as in any of the preceding claims; with a carboxylic acid derivative of the general formula (III)



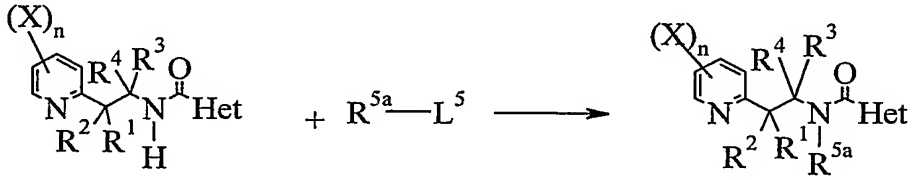
(III)

in which :

- Het is as defined in any of the preceding claims ; and
- L^2 is a leaving group chosen as being a halogen atom, a hydroxyl group, $-OR^6$, $-OCOR^6$, R^6 being a C_1-C_6 alkyl, a C_1-C_6 haloalkyl, a benzyl, 4-methoxybenzyl, pentafluorophenyl or a group of formula  ;

in the presence of a catalyst and, if L^2 is a hydroxyl group, in the presence of a condensing agent.

13. A process according to claim 12, characterised in that R^5 is a hydrogen atom and that the process is completed by a further step according to the following reaction scheme :



(Id) (XXII) (Ia)

in which : - R^1, R^2, R^3, R^4, X, n and Het are as defined in any of the claims 1 to 15;

- R^{5a} is a cyano group, a formyl group, a hydroxy group, a C_1-C_6-alkyl, a C_1-C_6-halogenoalkyl having 1 to 5 halogen atoms, a C_1-C_6-alkoxy, a C_1-C_6-halogenoalkoxy having 1 to 5 halogen atoms, a C_3-C_6-cycloalkyl, a C_3-C_6-halogenocycloalkyl having 1 to 5 halogen atoms, a C_2-C_6-alkenyl, a C_2-C_6-alkynyl, a C_1-C_6-alkoxy-C_1-C_6-alkyl, a C_1-C_6-cyanoalkyl, a C_1-C_6-aminoalkyl, a C_1-C_6-alkylamino-C_1-C_6-alkyl, a di-C_1-C_6-alkylamino-C_1-C_6-alkyl, a C_1-C_6-alkylcarbonyl, a C_1-C_6-halogenalkylcarbonyl having 1 to 5 halogen atoms, a C_1-C_6-alkyloxycarbonyl, a C_1-C_6-benzyloxycarbonyl, a C_1-C_6-alkoxy-C_1-C_6-alkylcarbonyl, a C_1-C_6-alkylsulfonyl or a C_1-C_6-halogenoalkylsulfonyl having 1 to 5 halogen atoms; and

- L^5 is a leaving group chosen as being a halogen atom, a 4-methyl phenylsulfonyloxy or a methylsulfonyloxy;

comprising the reaction of a compound of general formula (Id) with a compound of general formula (XXII) to provide a compound of general formula (Ia).

14. A fungicidal composition comprising an effective amount of a compound according to any of the claims 1 to 11 and an agriculturally acceptable support.

15. A method for preventively or curatively combating the phytopathogenic fungi of crops, characterised in that an effective and non-phytotoxic amount of a composition according to claim 14 is applied to the plant seeds or to the plant leaves and/or to the fruits of the plants or to the soil in which the plants are growing or in which it is desired to grow them.